

PATENT ABSTRACTS OF JAPAN

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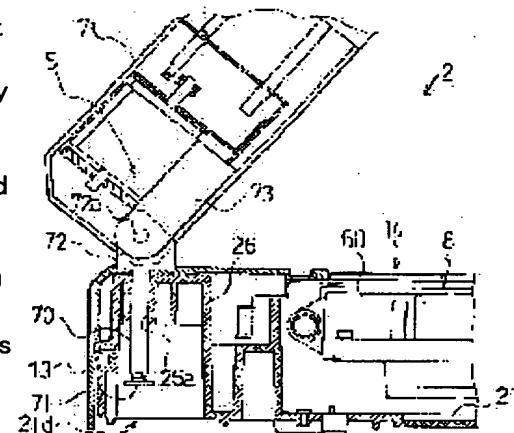
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(54) STRUCTURE FOR ATTACHING ORIGINAL PRESSING COVER

(57)Abstract:

PROBLEM TO BE SOLVED: To solve the problems that the cost is high because a supporting base for supporting an original pressing cover is attached to the chassis of an original reader as a different member in a conventional practice and also that an accurate supporting position can not be obtained when the molding accuracy and the assembly accuracy of members are poor because the supporting base is attached to the chassis as a different member.

SOLUTION: In a configuration in which an image reader 6 is housed in a chassis 21 molded integrally into a box shape, made of resin and a turnable original pressing cover 7 is arranged over the image reader 6, a supporting base 26 through which the supporting pin 70 of the cover 7 is inserted is molded integrally with the chassis 21. The reader 6 and the cover 7 are formed integrally and vertically as a reading unit 2 in an openable and closable way, and a falling-off prevention member 71 is screwed to the lower end of the pin 70 from the rear side surface of the unit 2.



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CLAIMS**[Claim(s)]**

[Claim 1] The susceptor which inserts the support pin of this original cover covering in the configuration which holds an image reader in the chassis made of the resin really fabricated by box-like, and arranges rotatable original cover covering on this image reader upper part is the attachment structure of original cover covering characterized by considering as the configuration really fabricated by said chassis.

[Claim 2] Said image reader and original cover covering are the attachment structure of original cover covering according to claim 1 characterized by considering as the configuration which is constituted possible [closing motion] in the vertical direction in one as a reading unit, falls out from the rear face of this reading unit to said support pin lower limit, and attaches a prevention member.

[Claim 3] Said omission prevention member is the attachment structure of original cover covering according to claim 2 characterized by considering as the configuration which **** to said support pin lower limit.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the configuration of the suscepter of original cover covering in detail about the structure of the chassis of an image reader.

[0002]

[Description of the Prior Art] The facsimile of a configuration of having laid in the upper part of the Records Department which has image formation equipment conventionally possible [closing motion of the reading unit which has an image reader], a copy machine, etc. are well-known. An image reader is equipment which reads with a scanner the manuscript to which paper was fed from a quiescence manuscript or automatic feeding equipment, and the chassis of these images reader, a scanner, automatic feeding equipment, original cover covering, etc. are constituted as a reading unit as one. Moreover, it is constituted by the hinge device rotatable in the vertical direction, a support pin protrudes on the lower part of this hinge device, and original cover covering is considered as the configuration which supports original cover covering by inserting in the suscepter in which this support pin was prepared by the chassis of an image reader.

[0003]

[Problem(s) to be Solved by the Invention] Conventionally [above-mentioned], since the suscepter for supporting original cover covering in a configuration was considering as the configuration attached in a chassis as another member, it caused cost quantity. Moreover, in order to attach in a chassis as another member, when the shaping precision and assembly precision of a member are bad, there is a problem that an exact support location is not obtained. Moreover, in the configuration which is really [resin] fabricating the chassis which holds an image reader in order to attain lightweight-ization, maintenance nature improves more by reducing components mark.

[0004]

[Means for Solving the Problem] The technical problem which is going to solve this invention is like the above, and The means for solving a technical problem is explained below. That is, the image reader was held in the chassis of like and the product made of the resin really fabricated by box-like according to claim 1, and suscepter which inserts the support pin of this original cover covering was taken as the configuration really fabricated by said chassis in the configuration which arranges rotatable original cover covering on this image reader upper part.

[0005] Moreover, it considered as the configuration according to claim 2 which like, said image reader, and original cover covering are constituted possible [closing motion] in the vertical direction in one as a reading unit, falls out from the rear face of this reading unit to said support pin lower limit, and attaches a prevention member.

[0006] Moreover, it considered as the configuration according to claim 3 which **** like and said omission prevention member to said support pin lower limit.

[0007]

[Embodiment of the Invention] Next, it explains using the drawing of attachment of the gestalt of operation of this invention. The perspective view of the facsimile apparatus which is one example which has the image reader which drawing 1 requires for this invention, and drawing 2 are the same, a transverse-plane sectional view, the top view of a chassis in which drawing 3 holds an image reader, the side-face sectional view showing the attachment structure of original cover covering which drawing 4 requires for this invention, and drawing 5

are the same, and it is a side-face sectional view, and is drawing showing the condition of having laid the book in the manuscript installation side.

[0008] First, drawing 1 and drawing 2 explain the outline configuration of the facsimile apparatus with which the image reader of this invention is applied. Facsimile apparatus F arranges the reading unit 2 which is a read station above the Records Department 1, and is constituted, and this reading unit 2 is made rotatable the core [the rotation supporting point 20] to the Records Department 1. The interior of image formation equipment 3 and the sheet paper cassette 4 is carried out to the Records Department 1 up and down, respectively, and after feeding to it paper and recording the form deposited in a sheet paper cassette 4 on image formation equipment 3, it constitutes so that it may discharge to the recording paper discharge tray 5. In addition, the view A shown in drawing 1 etc. for convenience in the following explanation is made into the anterior part side (transverse-plane side) of facsimile apparatus F.

[0009] It is made to read by scanning the manuscript which had contained the image reader 6 which consists of scanner 60 grade, and was laid on this manuscript installation side 14 in the reading unit 2 on the other hand in the reading case 13 which made the top face the transparency-like manuscript installation side 14 with this scanner 60. Moreover, above the reading case 13, the original cover covering 7 constituted possible [closing motion] focusing on one of them shall be arranged, and the manuscript laid on the manuscript installation side 14 with this original cover covering 7 shall be pressed down from the upper part.

[0010] The automatic feeding equipment (ADF equipment) 8 which feeds paper to a manuscript automatically is attached to the end section of the original cover covering 7, and this automatic feeding equipment 8 is constituted by feed equipment 11 and the transport device 12. And after taking up at a time one manuscript laid in the manuscript supply tray 9 with the feed equipment 11 of automatic feeding equipment 8, conveying it to the ADF read station 17 prepared in the end section of the manuscript installation side 14 by the transport device 12 and reading the contents with a scanner 60, it constitutes so that it may discharge to the manuscript discharge tray 10 formed in the top face of the original cover covering 7.

[0011] That is, the reading unit 2 is constituted so that it can use as a scanner of the sheet feed type which reads while carrying out location immobilization of the scanner 60 and feeding with a manuscript, while using as a scanner of the flatbed type which is made to scan a scanner 60 and reads a quiescence manuscript.

[0012] Moreover, the key panel 15 is attached to the anterior part of the reading case 13, and read the contents of a manuscript, the transmission place at the time of carrying out facsimile transmission of the read contents is set up, or it is made to perform record by the image formation equipment 3 of receiving contents or the read contents by operating the various actuation keys of this key panel 15.

[0013] Next, the configuration of a chassis 21 is explained. As shown in drawing 2 , the reading case 13 has held the chassis 21 made of resin in the interior, and is considering it as the configuration which arranges the image reader 6 which consists of scanner 60 grade in this chassis 21. A base and a side face on all sides are the configurations of the really fabricated core box, and the chassis 21 is attaining lightweight-ization of the reading unit 2 by constituting the chassis 21 whole from resin. Moreover, as shown in drawing 3 , the reinforcement wing 22 is attached in the anterior part of a chassis 21.

[0014] Base 22b of plane view abbreviation trapezoidal shape, rib 22r prepared in the shape of a grid, and side-face 22a and 22a are really fabricated by resin, and the reinforcement wing 22 has reinforced the reinforcement of the really [resin] fabricated chassis 21. And it is considering as the configuration which serves also as a role of supporter material of the key panel 15 as a configuration in which said key panel 15 is formed in the upper part of this reinforcement wing 22 as shown in drawing 1 .

[0015] Next, the attachment structure of the original cover covering 7 concerning this invention is explained. Said original cover covering 7 is laid on said chassis 21 in supporter S-S of the posterior part right and left shown by drawing 1 $R > 1$, and is enabling installation of a manuscript on the manuscript installation side 14 by raising the anterior part side of this original cover covering 7 up.

[0016] As shown in the original cover covering 7 at drawing 4 , the hinge device which consists of a cam 72 and a rotation member 73 in supporter S-S is established. The support pin 70 is fixed to the lower part of a cam 72, and the rotation member 73 is supported pivotably focusing on revolving-shaft 72a prepared in the cam 72, and it is fixed to the original cover covering 7 through the stay which this rotation member 73 does not illustrate.

[0017] On the other hand, as shown in drawing 3 , susceptor 26-26 is formed in the both-sides section by the

side of chassis 21 posterior part. Susceptor 26 is considered as the product made of resin, and as shown in the sectional view of drawing 4, it is a chassis 21 and really fabricated. Support hole 26a and 26a are prepared in the vertical direction at this susceptor 26-26, respectively, and it is considered as the configuration which lays this original cover covering 7 on a chassis 21 by inserting the support pin 70-70 which protruded caudad in supporter S-S of said original cover covering 7. Thus, since susceptor 26 was considered as the configuration which really fabricates on the chassis 21 made of resin, components mark were reduced and low cost-ization was able to be attained. Moreover, since it was really [resin] shaping, the configuration of susceptor 26 could be fabricated to arbitration, and it also became specification modification flexibly with the configuration which can respond.

[0018] While the original cover covering 7 is supported on a chassis 21 through the support pin 70 by the above configuration, it is supposed that it is rotatable according to the hinge device. In addition, the interior of the spring which is not illustrated is carried out to the rotation member 73, and the spring energization force is generated, and when this spring is pressed by the cam 72 with rotation of the rotation member 73, it constitutes so that the original cover covering 7 may close caudad slowly.

[0019] Moreover, it escapes in the lower limit of said support pin 70, and the prevention member 71 is attached. It enables it to prevent that the support pin 70 escapes from this omission prevention member 71 up by making wearing possible by making it **** to the lower limit of the support pin 70, and constituting the plane view configuration from support hole 26a greatly. That is, in this case, as shown in drawing 5, when a thick manuscript (book 16) is laid in the manuscript installation side 14, by lifting the support pin 70 up, the original cover covering 7 is maintained at an abbreviation horizontal, manuscript reading of it is made possible, but said omission prevention material 71 contacts the perimeter of support hole 26a, and it constitutes so that the support pin 70 may not fall out.

[0020] Moreover, as shown in drawing 4 and drawing 5, the chassis 21 is using the lower part of susceptor 26 as 21d of openings, falls out from the background of a chassis 21, and is enabling wearing of the prevention material 71. Since it escaped from the background of a chassis 21 and desorption of the prevention material 71 was performed by this where the reading unit 2 is rotated up focusing on said rotation supporting point 20, it became the configuration that an assembly could be performed easily. Moreover, by escaping like the above-mentioned, since the prevention material 71 is considered as the configuration made to **** to the lower limit of the support pin 70, it is attaining low cost-ization as a simple configuration easily [an assembly].

[0021]

[Effect of the Invention] Since this invention was constituted like the above, the following effectiveness is done so. That is, in the configuration which holds an image reader in the chassis of like and the product made of the resin really fabricated by box-like according to claim 1, and arranges rotatable original cover covering on this image reader upper part, since the susceptor which inserts the support pin of this original cover covering considered as the configuration really fabricated by said chassis, components mark were reduced and low cost-ization was able to be attained. Moreover, since it was really [resin] shaping, the configuration of susceptor could be fabricated to arbitration, and it also became specification modification flexibly with the configuration which can respond.

[0022] Moreover, it became the configuration according to claim 2 of having excelled in maintenance nature since it considered as like and the configuration which said image reader and original cover covering are constituted possible [closing motion] in the vertical direction in one as a reading unit, fall out from the rear face of this reading unit to said support pin lower limit, and attaches a prevention member.

[0023] Moreover, since it considered as the configuration according to claim 3 which **** like and said omission prevention member to said support pin lower limit, low cost-ization was able to be attained as a configuration with an easily simple assembly.

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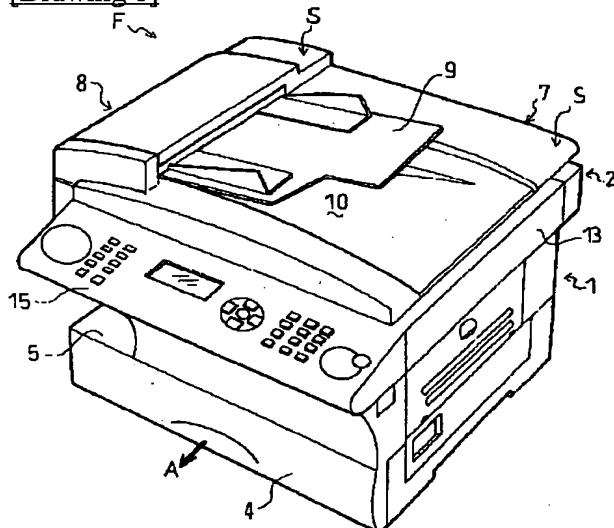
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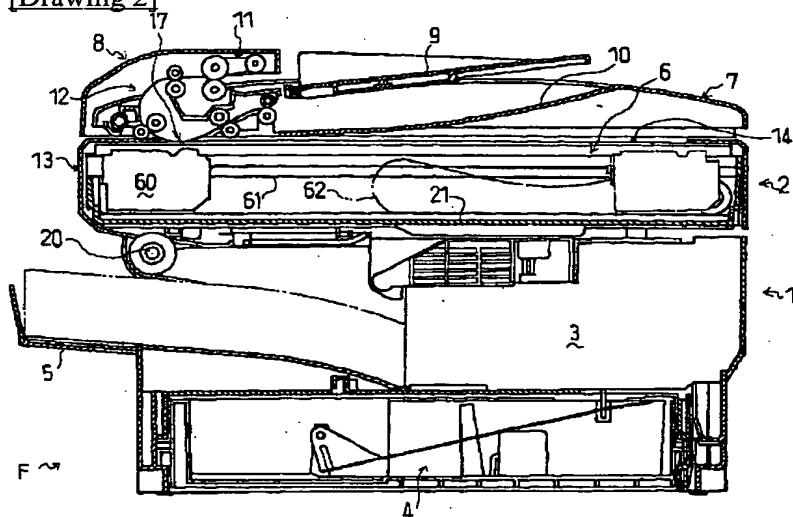
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DRAWINGS

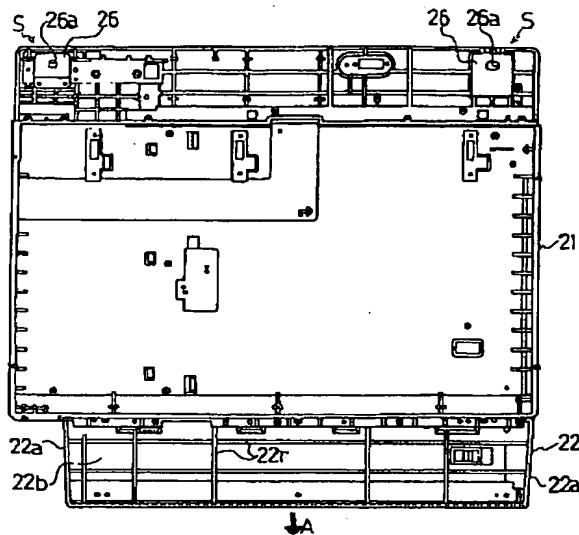
[Drawing 1]



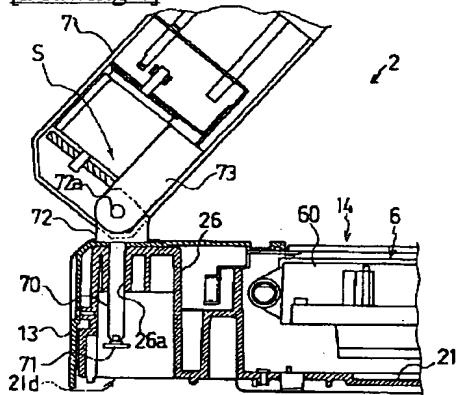
[Drawing 2]



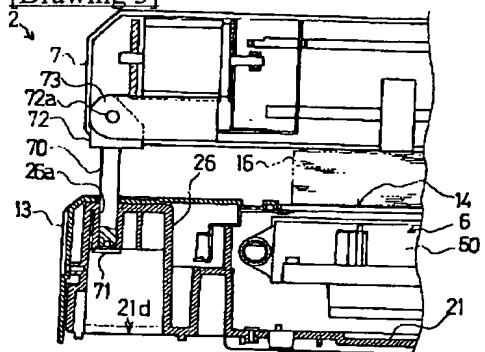
[Drawing 3]



[Drawing 4]



[Drawing 5]



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